Year 10 Summer Term 1 (March – April 2025)

Curriculum Overview

Core Subjects – All learners

English

Language Paper 1
Reading: Preparation for Language summer CAEs
Reading
Reading a literature fiction text to consider how established writers use narrative and descriptive techniques to capture the interest of readers.
Identify and interpret explicit and implicit information and ideas.
Explain, comment on and analyse how writers use language and structure to achieve effects and influence readers, using relevant subject terminology to support their views.
Evaluate texts critically and support this with appropriate textual references.
Imaginative Writing
o Write imaginatively, creatively, and effectively for different purposes and audiences.
o Develop and sustain ideas, describing settings, characters, and atmosphere in narratives.
o Organize writing logically and coherently, using a range of structural features effectively.
Technical Accuracy:
o Use a wide range of vocabulary and sentence structures for clarity, purpose, and effect. o Apply accurate spelling, punctuation, and grammar.
o Use linguistic and literary devices appropriately to enhance writing.
Writing for Different Purposes:
o Write in various forms, including descriptive and narrative writing.
o Tailor writing to suit different audiences and purposes, demonstrating an understanding of tone and style.
o Use techniques such as rhetorical devices, varied sentence structures, and appropriate paragraphing to engage readers

Literature
Shakespeare: Macbeth (Paper 1)
Maintain a critical style and develop an informed personal response.
Use textual references, including quotations, to support and illustrate interpretations.
Analyse the language, form and structure used by a writer to create meanings and effects, using relevant subject terminology where appropriate.
Show understanding of the relationships between texts and the contexts in which they were written (Jacobean era/Divine right of kings & the great chain of being/James I/Gunpowder plot/Tragic hero & Aristotle/Supernatural and Daemonologie)
Use a range of vocabulary and sentence structures for clarity, purpose and effect, with accurate spelling and punctuation.

Mathematics

Foundation Mathematics Curriculum

Ratio and Proportion

Use ratio notation.
- Write a ratio in its simplest form.
- Solve simple problems using ratios.
- Solve simple problems using ratios.
- Use ratios involving decimals.
- Write and use ratios for shapes and their enlargements.
- Use ratios to convert between units.
- Divide a quantity into 2 parts in a given ratio.
- Divide a quantity into 3 parts in a given ratio.
- Solve word problems using ratios.
- Use bar models to help solve ratio problems.
- Compare ratios.
- Write ratios in the form $1 : n$ or $n : 1$.
- Solve ratio and proportion problems.

Higher Mathematics Curriculum

Multiplicative Reasoning
- Find an amount after repeated percentage changes.
- Solve growth and decay problems.
- Solve problems using an iterative process.
- Calculate rates.
- Convert between metric speed measures.
- Use a formula to calculate speed and acceleration.
- Solve problems involving compound measures.
- Use relationships involving ratio.
- Use direct and indirect proportion.

Similarity and Congruence
- Show that two triangles are congruent.
- Know the conditions of congruence.
- Prove shapes are congruent.
- Solve problems involving congruence.

- Use the unitary method to solve proportion problems.
- Solve proportion problems in words.
- Work out which product is better value for money.
- Recognise and use direct proportion on a graph.
- Understand the link between the unit ratio and the gradient.
- Recognise different types of proportion.
- Solve word problems involving direct and inverse proportion.

Right-angled Triangles

- Understand Pythagoras' Theorem
- Calculate the length of the hypotenuse in a right-angled triangle.
- Solve problems using Pythagoras' theorem.
- Calculate the length of a line segment AB.
- Calculate the length of a shorter side in a right-angled triangle.
- Solve problems using Pythagoras' theorem.
- Calculate the length of a line segment AB.
- Calculate the length of a shorter side in a right-angled triangle.
- Solve problems using Pythagoras' theorem.
- Understand and recall the sine ratio in right-angled triangles.
- Use the sine ratio to calculate the length of a side in a right-angled triangle.
- Use the sine ratio to solve problems.
- Use the sine ratio to calculate an angle in a right-angled triangle.
- Use the sine ratio to solve problems.
- Understand and recall the cosine ratio in right-angled triangles.
- Use the cosine ratio to calculate the length of a side in a right-angled triangle.
- Use the cosine ratio to calculate an angle in a right-angled triangle.
- Use the cosine ratio to solve problems.
- Understand and recall the tangent ratio in right-angled triangles.
- Use the tangent ratio to calculate the length of a side in a right-angled triangle
- Use the tangent ratio to calculate an angle in a right-angled triangle.
- Solve problems using an angle of elevation or angle of depression.
- Understand and recall trigonometric ratios in right-angled triangles.

- Use geometric sketching to help solve congruency problems.
- Use the ratio of corresponding sides to work out scale factors.
- Find missing lengths on similar shapes.
- Use geometric sketching to help solve similarity problems.
- Use similar triangles to work out lengths in real life.
- Use the link between linear scale factor and area scale factor to solve problems.
- Use the links between scale factors for length, area and volume to solve problems.

More Trigonometry

- Understand and use upper and lower bounds in calculations, especially involving trigonometry.
- Understand how to find the sine of any angle.
- Know the graph of the sine function and use it to solve equations.
- Understand how to find the cosine of any angle.
- Know the graph of the cosine function and use it to solve equations.
- Understand how to find the tangent of any angle.
- Know the graph of the tangent function and use it to solve equations.
- Find the area of a triangle and a segment of a circle.
- Use the sine rule to solve 2D problems.
- Use the cosine rule to solve 2D problems.
- Solve bearings problems using trigonometry.
- Use Pythagoras' theorem in 3D.
- Use trigonometry in 3D.
- Recognise how changes in a function affect trigonometric graphs.
- Recognise how changes in a function affect trigonometric graphs.

	• Use trigonometric ratios to solve problems. • Know the exact values of the sine, cosine and tangent of some angles.	
Combined Science	**10B7 Hormonal control (ORG)** • Identify the major glands in the human body. • Define the term hormone. • Explain how blood glucose is regulated. • Explain how blood glucose is affected and controlled in type 1 and 2 diabetic patients. • Explain how hormones regulate the menstrual cycle. • Explain how the hormones of the female reproductive system can be used in contraception or in treating infertility. **Skill -Compare and contrast** hormonal and nervous control. **Tier 3 vocabulary** Endocrine, Pituitary, Insulin, Diabetes, Progesterone, Menstrual, Contraception, Infertility **10P7 Forces & motion (FOR)** • Use Newton's laws to describe the effect of forces on objects • Describe how forces affect the motion and speed of an object • Describe how thinking distance and breaking distance affect the overall stopping distance of a car • Apply equations to calculate the momentum of objects • Apply Hooke's law to describe the effect of stretching or compressing an elastic object **Skill -Use calculations and graphs** to calculate the forces of moving objects. **Tier 3 vocabulary** Braking distance, Thinking distance, Stopping distance, Momentum, Inertial mass, Spring constant, Hooke's law, Limit of proportionality, Terminal velocity **10C6 Reversible reactions & equilibrium (REA)** • Use the particle model to describe how the rate of a reaction can be altered. • Describe and explain how surface area, temperature, concentration, gas pressure and catalysts can affect the rate of a reaction. • Describe reversible reactions in terms of reactants and products. • Define the term equilibrium in terms of rates of reaction. • Explain factors that can affect the position of equilibrium **Skill -Describe** the factors which affect the equilibrium of a reversible reaction **Tier 3 vocabulary** anhydrous precise / precision catalyst hydrated reversible reaction closed system equilibrium, Le Châtelier's Principle **10C7 Crude oil & fuels (REA)** • Describe the formation of crude oil and explain why it is a finite resource. • Describe and explain how fractional distillation can be used to produce useful fractions from crude oil. • Use the general formula for alkanes to write formulae and draw structures of hydrocarbons. • Describe and explain the processes involved in cracking. • Test for and explain the difference between saturated and unsaturated hydrocarbons. **Skill -Evaluate** the use of fuels **Tier 3 vocabulary** alkane general formula alkene hydrocarbon cracking mixture distillation oxidised double bond saturated flammable thermal decomposition fraction unsaturated viscosity	
Core Physical Education	**Self-Reflection** For students to understand what is meant by the term 'self-reflection and to be able to apply this knowledge to PA, Sport and further aspects of life. **Self-Care** Students will understand what is meant by the term 'self-care' and to be able to apply this knowledge to PA, Sport and further aspects of life. **Self-Appraisal**	

Core

	Students will gain an understanding of the term 'self-appraisal and will to be able to apply this knowledge to PA, Sport and further aspects of life. **Self-Improvement** Students will understand what is meant by the term 'self-improvement' and to be able to apply this knowledge to PA, Sport and further aspects of life.
ARRK Lessons **Core Values:** **A**spirational **R**esilient **R**espectful **K**ind	**Careers** **Rights and British Values – Exploring British Values** • To understand how to spot fake news • To understand the definition of a hate crime and the protected characteristics • To understand the importance of Promoting British Values • To know the meaning of mutual respect and tolerance • To know what individual liberty looks like in my everyday life • To define what human rights are • To understand what democracy in UK looks like

Humanities

Geography	**Continue Changing Economic World – 3 weeks** • Evaluate major changes in the economy of the UK Describe the importance of Business and Science Parks in the UK • Assess the reasons for a North – South divide in the UK • Explain the role of the UK in the wider world **Physical Landscapes of the UK: Rivers – 2 weeks** • Describe the profile of a river • Explain how rivers use several physical processes to shape the land • Explain the formation of key features such as waterfalls, meanders and levees. **Skills development** • Comparing countries using measures of development. • Using data and describing patterns of distribution on maps. • Using statistical analysis skills such as finding the mean or median
History	**Crime and Punishment Through Time 1000-Present** • Describe the changes in punishments over time • Explain how authorities deal with crime and punishments over time • Analyse how attitudes towards crime and punishment have changed over time The following key events will be discussed during this topic: Saxon England The Norman Conquest Trial by Ordeal Gunpowder Plot Witchcraft Transportation Robert Peel Pentonville Prison Conscientious Objectors Abolition of Capital Punishment Jack the Ripper Whitechapel in the 1880s.
Philosophy and Ethics	**Paper 1 Section 2: Marriage & the Family** • Equality – the difference between prejudice & discrimination, the different Christian views about gender equality. • Christian Attitudes to Gender Roles – how roles & views have changed over time. • Equality – the difference between prejudice & discrimination, the different Christian views about gender equality.

Modern Foreign

Spanish

Paper 1 Section 4: Matters of Life & Death

- Christian teachings about the origins and value of the universe & life: scientific explanations for the origins of the universe & life and Christian responses to them.
- Sanctity of life: why human life is holy; how the Bible can be interpreted to show life as special, the importance of sanctity of life today.
- Abortion & Euthanasia – nature of each, Christian responses, biblical teachings, ethical theories.
- Christian teachings and beliefs about life after death & beliefs that support the existence of a life after death (including remembered lives, paranormal, logic, reward, comfort and meeting loved ones who have passed on).
- Christian responses to non-religious arguments against life after death: why Christians reject them (including as a source of comfort, lack of evidence).
- Issues in the natural world – threats to the world, including pollution, global warming, and the use of natural resources; stewardship and humanity's role as stewards. Animal rights (inc. experimentation & food).

Theme 3: Topic 3:
10.9 Protecting the environment

- Discussions of local environmentally problems.
- Use of '*si*' clauses with the present and future tense.
- Retrieval of modal verbs and conditional to discuss what we should do to protect the environment.
- Retrieval of the future and conditional tense to give future solutions
- Use of direct and indirect object pronouns.

<u>Theme 1: Topic 1</u>
10.10 Parent and Sibling Relationships

- Revisiting direct and indirect object pronouns.
- Use of *'cuyo'* to express 'whose'.
- Revision of the comparative and superlative to compare family members.
- Use of the imperfect tense to describe past relationships.

Design Technology

3D Product Design

Major Project:
Term 3: Developing ideas and refining techniques.

Focused Research

- Artist research
- In-depth topic research

Contextual Links

- Artist/designer studies
- Analysing artists/designer work

Developing Ideas

- Sketching designs
- Additional photography
- Digital designs
- Analysis of ideas
- Compare designs

Students will be considering ways to develop their ideas in personal and meaningful ways. This can begin with inspiration from contextual studies and learning how other artists/designers have developed similar ideas and concepts.

Design Technology

	Students will then combine and refine successful areas of their project into meaningful ideas to develop into potential outcomes. Throughout Y10 students will learn about new artists/designers and develop their knowledge of the meaning behind many works of art/design.
Engineering	**R038 – Principles of Engineering Design.** • This unit provides the opportunity for students to develop their understanding of the requirements of design briefs and design specifications for the development of new products. • Topics/Skills covered in the R038 unit include: • The reasons for the use of modelling, virtual and physical modelling of design ideas. Manufacture or modification of models and prototypes. Including the comparison of the model and prototype against the requirements of the design brief and specification • Types of criteria in and engineering design specification. Including the difference between needs and wants, the difference between quantitative data and qualitative data and the reasons for the product criteria (ACCESS FM). **R039 – Communicating Designs** • This unit develops techniques in generation, concept development and the communication of design ideas using hand rendering and computer-based presentation techniques including computer aided design software. • Production of an assembly drawing for a design proposal with an exploded view and a sectional view. Including isometric projection, parts list of up to 4 parts, number referencing, assembly instructions • Production of a 3D CAD model of a design proposal to include compound 3D shapes, rendering and a complex shape which includes dimensions, lines, and angles. • Production of 3D CAD assemblies of components including multiple components, mate tools, constraints, and animation
Textiles	**Major Project:** Term 3: Developing ideas and refining techniques. **Focused Research** • Artist research • In-depth topic research **Contextual Links** • Artist/designer studies • Analysing artists/designer work **Developing Ideas** • Sketching designs • Additional photography • Digital designs • Analysis of ideas • Compare designs Students will be considering ways to develop their ideas in personal and meaningful ways. This can begin with inspiration from contextual studies and learning how other artists have developed similar ideas and concepts. Students will then combine and refine successful areas of their project into meaningful ideas to develop into potential outcomes. Throughout Y10 students will learn about new textile artists and designers and develop their knowledge of the meaning behind many works of textile art and design.

Food Technology	**Food Science** This unit will enable students to develop an understanding of the different scientific processes that are involved in food production and preparation. Topics and Skills Covered: • Why food is cooked and the different methods of heat transfer. • Students will learn a range of preparation and cooking methods, alongside the importance of time, to achieve the desired characteristics in practicals. • Students will study the functional and chemical properties of food, including denaturation, coagulation, gluten formation, foam formation, gelatinisation, dextrinization, caramelisation. • Students will understand the use and importance of chemical and mechanical raising agents. • Students will gain exam question practise
Art	**Major Project:** Term 3: Developing ideas and refining techniques. **Focused Research** • Artist research • In-depth topic research **Contextual Links** • Artist/designer studies • Analysing artists/designer work **Developing Ideas** • Sketching designs • Additional photography • Digital designs • Analysis of ideas • Compare designs Students will be considering ways to develop their ideas in personal and meaningful ways. This can begin with inspiration from contextual studies and learning how other artists have developed similar ideas and concepts. Students will then combine and refine successful areas of their project into meaningful ideas to develop into potential outcomes. Throughout Y10 students will learn about new artists and develop their knowledge of the meaning behind many works of art.
Physical Education	**2.2 Sports Psychology** • Characterisation of a skill • Classification • Goal Setting **2.2 Sports Psychology** • Mental Preparation • Types of guidance • Types of feedback **Practical Assessment** Athletics Table tennis

Health and Social Care	**Learning outcome A:** **Understand human growth and development across life stages and the factors that affect it.** **Coursework** Pearson sets the assignments for the assessment of this component. The assignment for this component consists of four tasks. • In response to Task 1, learners will demonstrate their knowledge and understanding of the PIES growth and development through the life stages. • In response to Task 2, learners will demonstrate their knowledge and understanding of the impact of different factors on PIES growth and development through the life stages. • In response to Task 3a, learners will demonstrate their knowledge and understanding of the impact of life events on PIES growth and development. • In response to Task 3b, learners will demonstrate their knowledge and understanding of how individuals adapt to life events.

Business and IT

Business	**Unit 4** **Operations Management** This content area focuses on the various factors that influence the operations management decisions a business makes. Pupils will learn about: • Outsourcing tasks to another business • Lean production methods **Unit 5** **Business Growth** This content area focuses on business and enterprise growth that an enterprise will need to understand if it wants to continue to grow in the future. Pupils will learn about: **Internal & External growth** • Economies and diseconomies of scale • The challenge of growth
Information Technology	**How can we analyse data using a spreadsheet?** **Learning Aim A:** Data v Information, data formats, preparing data for processing, data collection methods, data quality, data privacy. **Learning Aim B:** Importing data, formatting of data, using formulas, using functions, absolute cell referencing, sorting information, decision making functions